

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended). A lipid assembly, being an organized collection of lipids, comprising:

(a) a biologically active non-liposome forming lipid having a hydrophobic region and a polar headgroup, wherein the atomic mass ratio between the headgroup and hydrophobic region is less than 0.3;

(b) a lipopolymer having a hydrophobic lipid region and a hydrophilic polymer headgroup, wherein the atomic mass ratio between the headgroup and hydrophobic region is at least 1.5; and

(c) a liposome forming lipid,

the lipid assembly being chemically and physically stable under storage conditions of 4°C in biological fluids, for at least six months.

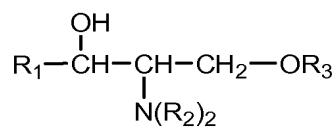
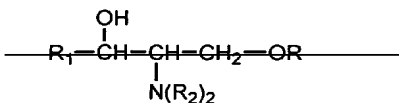
2 (Currently Amended). The lipid assembly of Claim 1, wherein the assembly has an additive effective comprising
~~a lipid matrix, the lipid matrix comprising a lipid or a combination of lipids having an additive packing parameter in the range of 0.74-1.0.~~

3 (Currently Amended). The lipid assembly of Claim 1, having a level of water tightly bound to said lipopolymer headgroup of at least ~~about~~ 60 molecules of water per lipopolymer headgroup.

4 (Cancelled).

5 (Currently Amended). The lipid assembly of Claim ~~2, 1,~~ wherein said biologically active non-liposome forming lipid is selected from the group consisting of ceramides, ceramines, sphinganine, sphinganine-1-phosphate, di- or tri-alkylsphingosines and their structural analogs.

6 (Currently Amended). The lipid assembly of Claim 5, wherein said biologically active non-liposome forming lipid has the following general formula (I):



wherein

- ~~R₁ represent~~ represents a C₂-C₂₆, saturated or unsaturated, branched or unbranched, aliphatic chain, wherein the aliphatic chain may be substituted with one or more hydroxyl or cycloalkyl groups and may consist of a cycloalkylene moiety;
- R₂, which may be the same or different, represents a hydrogen, a C₁-C₂₆ saturated or unsaturated, branched or unbranched chain selected from the group consisting of an aliphatic chain, an aliphatic carbonyl chain and, a cycloalkylene-containing aliphatic chain, wherein the aliphatic chain may be substituted with an aryl, arylalkyl or arylalkenyl group;
- R₃ represents a hydrogen, a methyl, ethyl,

ethenyl or a phosphate group.

7 (Currently Amended). The lipid assembly of Claim 6, wherein said biologically active non-liposome forming lipid is a C₂-C₂₆ ceramide.

8 (Currently Amended). The lipid assembly of Claim 6, wherein said biologically active non-liposome forming lipid is N,N-dimethylsphingosine (DMS).

9 (Cancelled).

10 (Currently Amended). The lipid assembly of Claim 1, wherein said lipopolymer comprises a polymer headgroup selected from the group consisting of polyethylene glycol (PEG), polysialic acid, polylactic acid, polyglycolic acid, apolylactic-polyglycolic acid, polyvinyl alcohol, polyvinylpyrrolidone, polymethoxazoline, polyethyloxazoline, polyhydroxyethyloxazoline, polyhydroxypropyloxazoline, polyaspartamide, polyhydroxypropyl methacrylamide, polymethacrylamide, polydimethylacrylamide, polyvinylmethylether, polyhydroxyethyl acrylate, and derivatized celluloses.

11 (Currently Amended). The lipid assembly of ~~Claim 9,~~ Claim 10, wherein said polymer headgroup is polyethylene glycol (PEG) having an atomic mass in the range of about 750_Da to about 20,000 Da.

12 (Cancelled).

13 (Currently Amended). The lipid assembly of ~~Claim 10,~~ Claim 10, wherein said PEG has an atomic mass of 2,000Da (2kPEG).

14 (Currently Amended). The lipid assembly of ~~Claim 2,~~ 1, wherein said liposome forming lipid ~~matrix~~ comprises a phospholipid.

15 (Cancelled).

16 (Currently Amended). The lipid assembly of ~~Claim 12,~~ Claim 14, wherein said phospholipid is a glycerophospholipid selected from the group consisting of phosphatidylglycerol (PG), phosphatidylcholine (PC),

phosphatidic acid (PA), phosphatidylinositol (PI),
phosphatidylserine (PS), ~~and~~ sphingomyelin (SPM) and
derivatives of the same.

17 (Currently Amended). The lipid assembly of
Claim ~~27~~1, wherein said liposome forming lipid matrix
comprises a cationic lipid.

18 (Currently Amended). The lipid assembly of
Claim 17, wherein said cationic lipid is a monocationic lipid
having a headgroup selected from the group consisting of 1,2-
dimyristoyl-3-trimethylammonium propane (DMTAP); 1,2-
dioleyloxy-3-(trimethylamino) propane (DOTAP); N-[1-(2,3,-
ditetradecyloxy)propyl]-N,N-dimethyl-N-hydroxyethylammonium
bromide (DMRIE); N-[1-(2,3,-dioleyloxy)propyl]-N,N-dimethyl-
N-hydroxy ethyl-ammonium bromide (DORIE); N-[1-(2,3-
dioleyloxy) propyl]-N,N,N- trimethylammonium chloride
(DOTMA); 3β [N-(N',N'- dimethylaminoethane) carbamoyl]
cholesterol (DC-Chol); and dimethyl-dioctadecylammonium
(DDAB).

19 (Currently Amended). The lipid assembly of
Claim 18, wherein said cationic lipid is a polycationic lipid

having a headgroup selected from the group consisting of
spermine ~~or~~ and spermidine.

20 (Original). The lipid assembly of Claim 19,
wherein said polycationic lipid is N-[2-[[2,5-bis[3-
aminopropyl)amino]-1-oxopentyl]amino]ethyl]-N,N-dimethyl-2,3-
bis[(1-oxo-9-octadecenyl)oxyl]-1-propanaminium (DOSPA) or
ceramide carbamoyl spermine (CCS).

21-25 (Cancelled).

26 (Currently Amended). A pharmaceutical
composition comprising a physiologically acceptable carrier
and an amount of a ~~stable~~ lipid assembly in accordance with
claim 1, the amount being which is sufficient to achieve a
biological effect at a target site, ~~the lipid assembly~~
~~comprising:~~

- ~~(a) a biologically active lipid having a~~
~~hydrophobic region and a polar headgroup, wherein~~
~~the atomic mass ratio between the headgroup and~~
~~hydrophobic region is less than 0.3;~~
- ~~(b) a lipopolymer having a hydrophobic lipid region~~
~~and a hydrophilic polymer headgroup, wherein the~~

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~~atomic mass ratio between the headgroup and
hydrophobic region is at least 1.5, the lipid
assembly being chemically and physically stable
under storage conditions of 4°C in biological
fluids, for at least six months.~~

Claims 27-80 (Cancelled).